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EXAMINER LEE, EDMUND H				
ART UNIT		PAPER NUMBER		
1732				

DATE MAILED: 03/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/076,609	Applicant(s) KITAYAMA ET AL.	
	Examiner EDMUND H. LEE	Art Unit 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 5-8 and 12-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 9-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/26/02</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

a) those claims directed to using a mold comprising a pair of male and female mold halves that can be moved toward and away from each other; and opening the mold halfway and forming a predetermined gap between the pair of male and female mold halves.

b) those claims directed to using a pair of male and female mold halves in which one of the mold halves has a movable block that is located such that it can be moved toward or away from the other mold half; and moving the movable block away from the other mold half.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, there is no generic claim.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include

all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Ken Colton on 3/4/04 a provisional election was made with oral traverse to prosecute the invention of group a, claims 1-4 and 9-11. Affirmation of this election must be made by applicant in replying to this Office action. Claims 5-8 and 12-14 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

4. Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Controlling the length of the primary cooling step is critical or essential to the practice of the invention, but not included in the claim(s) is not

Art Unit: 1732

enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). As found on pg 18, lns 18-22 of the instant specification, it is important to control the length of the primary cooling period in order to prevent significant deformation to the molded article, substantial damage to the fabric skin material, and irrecoverability of the nap's shape.

5. Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Performing the half-opening step within one second or less is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). As found on pg 20, lns 8-11 of the instant specification, if the half-opening step is not performed within one second or less than the nap does not recover.

6. Claims 9-11 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Controlling the length of the primary cooling step is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). As found on pg 18, lns 18-22 of the instant specification, it is important to control the length of the primary cooling period in order to prevent significant deformation to the molded article, substantial damage to the fabric skin material, and irrecoverability of the nap's shape.

7. Claims 9-11 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Performing the half-opening step within one second or

Art Unit: 1732

less is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). As found on pg 20, lns 8-11 of the instant specification, if the half-opening step is not performed within one second or less than the nap does not recover.

8. Claims 1-4 and 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "an skin" (cl 1, ln 2; cl 9, ln 2) is idiomatically incorrect.

The phrase "a skin material" (cl 1, ln 7) is indefinite because it is unclear if it is the same skin material having nap on the other surface as mentioned in the preamble. If it is meant to be the skin material having the nap on the other surface then it should be positively and clearly recited as such.

The phrase "said thermoplastic resin" (cl 1, ln 15) lacks antecedent basis in the claim.

The phrase "said thermoplastic resin" (cl 1, lns 15-16) lacks antecedent basis in the claim.

The phrase "a skin material" (cl 9, ln 7) is indefinite because it is unclear if it is the same skin material having nap on the other surface as mentioned in the preamble. If it is meant to be the skin material having the nap on the other surface then it should be positively and clearly recited as such.

The phrase "of said mold of said mold" (cl 9, lns 8-9) is idiomatically incorrect.

The phrase "said thermoplastic resin" (cl 9,ln 15) lacks antecedent basis in the claim.

The phrase "said thermoplastic resin" (cl 9, lns 15-16) lacks antecedent basis in the claim.

Correction and/or clarification is required.

9. Claim 1 is directed to an invention not patentably distinct from claims 1 and 5 of commonly assigned USPN 6413461. Specifically, USPN 6413461 teaches the basic claimed process including using a mold comprising a pair of male and female mold halves that can be moved towards and away from each other; supplying a skin material to a gap between the pair of male and female mold halves of the mold in an open state; supplying molten synthetic resin between a back surface of the skin material and a molding surface of one of the pair of male and female mold halves that faces the back surface; clamping the mold either after the thermoplastic resin has been supplied or while the thermoplastic resin is being supplied; carrying out primary cooling of the molten synthetic resin while the mold is being clamped under a predetermined clamping pressure; opening the mold halfway and forming a predetermined gap between the pair of male and female mold halves; carrying out secondary cooling of the molten synthetic resin while the mold is being held in the half-open state; and opening the mold after the molten synthetic resin has hardened and extracting a molded article as a final product. As a note, the fabric with raise surface of USPN 6413461 constitutes a skin material having a nap on the outer surface. However, USPN 6413461 does not teach opening

Art Unit: 1732

the mold halfway in no more than one second. The opening of a mold halfway in no more than one second is a well-known in the molding art in order to reduce cycle time without compromising quality of molded article. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to open the mold of USPN 6413461 within one second in order to reduce cycle time.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302). Commonly assigned USPN 6413461, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee is required under 35 U.S.C. 103(c) and 37 CFR 1.78(c) to either show that the conflicting inventions were commonly owned at the time the invention in this application was made or to name the prior inventor of the conflicting subject matter. Failure to comply with this requirement will result in a holding of abandonment of the application.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications filed on or after November 29, 1999.

Art Unit: 1732

10. Claim 9 is directed to an invention not patentably distinct from claims 1 and 5 of commonly assigned USPN 6413461. Specifically, USPN 6413461 teaches the basic claimed process including using a mold comprising a pair of male and female mold halves that can be moved towards and away from each other; supplying a skin material to a gap between the pair of male and female mold halves of the mold in an open state; supplying molten synthetic resin between a back surface of the skin material and a molding surface of one of the pair of male and female mold halves that faces the back surface; clamping the mold either after the thermoplastic resin has been supplied or while the thermoplastic resin is being supplied; carrying out primary cooling of the molten synthetic resin while the mold is being clamped under a predetermined clamping pressure; opening the mold halfway and forming a predetermined gap between the pair of male and female mold halves; carrying out secondary cooling of the molten synthetic resin while the mold is being held in the half-open state; and opening the mold after the molten synthetic resin has hardened and extracting a molded article as a final product. As a note, the fabric with raise surface of USPN 6413461 constitutes a skin material having a nap on the outer surface. However, USPN 6413461 does not teach forming the gap between the pair of male and female mold halves by adjusting in increments of 0.1 mm. The opening of a mold in small increments is a well-known in the molding art in order to prevent damage to the molded article. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to open the mold of USPN 6413461 in 0.1mm increments in order to prevent damage to the molded article.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302). Commonly assigned USPN 6413461, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee is required under 35 U.S.C. 103(c) and 37 CFR 1.78(c) to either show that the conflicting inventions were commonly owned at the time the invention in this application was made or to name the prior inventor of the conflicting subject matter. Failure to comply with this requirement will result in a holding of abandonment of the application.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications filed on or after November 29, 1999.

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Art Unit: 1732

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 2 of U.S. Patent No. 6413461. Although the conflicting claims are not identical, they are not patentably distinct from each other because USPN 6413461 teaches the basic claimed process including using a mold comprising a pair of male and female mold halves that can be moved towards and away from each other; supplying a skin material to a gap between the pair of male and female mold halves of the mold in an open state; supplying molten synthetic resin between a back surface of the skin material and a molding surface of one of the pair of male and female mold halves that faces the back surface; clamping the mold either after the thermoplastic resin has been supplied or while the thermoplastic resin is being supplied; carrying out primary cooling of the molten synthetic resin while the mold is being clamped under a predetermined clamping pressure; opening the mold halfway and forming a predetermined gap between the pair of male and female mold halves; carrying out secondary cooling of the molten synthetic resin while the mold is being held in the half-open state; and opening the mold after the molten synthetic resin has hardened and extracting a molded article as a final product. As a note, the fabric with raise surface of USPN 6413461 constitutes a skin material having a nap on the outer surface. However, USPN 6413461 does not teach opening the mold halfway in no more than one second. The opening of a mold halfway in no more than one second is a well-known in the molding art in order to reduce cycle time

Art Unit: 1732

without compromising quality of molded article. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to open the mold of USPN 6413461 within one second in order to reduce cycle time.

13. Claim 9 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 2 of U.S. Patent No. 6413461. Although the conflicting claims are not identical, they are not patentably distinct from each other because USPN 6413461 teaches the basic claimed process including using a mold comprising a pair of male and female mold halves that can be moved towards and away from each other; supplying a skin material to a gap between the pair of male and female mold halves of the mold in an open state; supplying molten synthetic resin between a back surface of the skin material and a molding surface of one of the pair of male and female mold halves that faces the back surface; clamping the mold either after the thermoplastic resin has been supplied or while the thermoplastic resin is being supplied; carrying out primary cooling of the molten synthetic resin while the mold is being clamped under a predetermined clamping pressure; opening the mold halfway and forming a predetermined gap between the pair of male and female mold halves; carrying out secondary cooling of the molten synthetic resin while the mold is being held in the half-open state; and opening the mold after the molten synthetic resin has hardened and extracting a molded article as a final product. As a note, the fabric with raise surface of USPN 6413461 constitutes a skin material having a nap on the outer surface. However, USPN 6413461 does not teach forming the gap between the pair of male and female mold halves by adjusting in increments of

Art Unit: 1732

0.1 mm. The opening of a mold in small increments is a well-known in the molding art in order to prevent damage to the molded article. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to open the mold of USPN 6413461 in 0.1mm increments in order to prevent damage to the molded article.

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al (USPN 6413461). In regard to claim 1, Kobayashi et al teach the basic claimed process including using a mold comprising a pair of male and female mold halves that can be moved towards and away from each other; supplying a skin material to a gap between the pair of male and female mold halves of the mold in an open state; supplying molten synthetic resin between a back surface of the skin material and a molding surface of one of the pair of male and female mold halves that faces the back surface; clamping the mold either after the thermoplastic resin has been supplied or while the thermoplastic resin is being supplied; carrying out primary cooling of the molten synthetic resin while the mold is being clamped under a predetermined clamping pressure; opening the mold halfway and forming a predetermined gap between the pair of male and female mold halves; carrying out secondary cooling of the molten synthetic resin while the mold is being held in the half-open state; and opening the mold after the molten synthetic resin has hardened and extracting a molded article as a final product.

Art Unit: 1732

As a note, the fabric with raise surface of Kobayashi et al constitutes a skin material having a nap on the outer surface. However, Kobayashi et al do not teach opening the mold halfway in no more than one second. The rate of opening a mold is well-known in the molding art as an important molding parameter and the desired time period to open the mold halfway would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention was made. Further, the claimed time period is generally well-known in the molding art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to open the mold of Kobayashi et al within one second in order to reduce cycle time. In regard to claims 2-4, Kobayashi et al teach forming a gap that equals or exceeds 80% of the thickness of the final product (fig 4); and performing the primary cooling step in two stages (col 5, lns 55-65). However, Kobayashi et al do not teach forming the gap by adjusting the mold halves in increments of 0.1mm. The rate of opening a mold is well-known in the molding art as an important molding parameter and the desired increment for achieving the gap would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention was made. Further, the claimed increment is generally well-known in the molding art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to open the mold of Kobayashi et al at an increment of 0.1mm in order to prevent damage to the molded article of Kobayashi et al.

Art Unit: 1732

16. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al (USPN 6413461). In regard to claim 9, Kobayashi et al teach the basic claimed process including using a mold comprising a pair of male and female mold halves that can be moved towards and away from each other; supplying a skin material to a gap between the pair of male and female mold halves of the mold in an open state; supplying molten synthetic resin between a back surface of the skin material and a molding surface of one of the pair of male and female mold halves that faces the back surface; clamping the mold either after the thermoplastic resin has been supplied or while the thermoplastic resin is being supplied; carrying out primary cooling of the molten synthetic resin while the mold is being clamped under a predetermined clamping pressure; opening the mold halfway and forming a predetermined gap between the pair of male and female mold halves; carrying out secondary cooling of the molten synthetic resin while the mold is being held in the half-open state; and opening the mold after the molten synthetic resin has hardened and extracting a molded article as a final product. As a note, the fabric with raise surface of Kobayashi et al constitutes a skin material having a nap on the outer surface. However, Kobayashi et al do not teach forming the gap by adjusting the mold halves in increments of 0.1mm. The rate of opening a mold is well-known in the molding art as an important molding parameter and the desired increment for achieving the gap would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention was made. Further, the claimed increment is generally well-known in the molding art and it would have been obvious to one of ordinary skill in the art at the time

Art Unit: 1732

the invention was made to open the mold of Kobayashi et al at an increment of 0.1mm in order to prevent damage to the molded article of Kobayashi et al. In regard to claims 10-11, Kobayashi et al teach forming a gap that equals or exceeds 80% of the thickness of the final product (fig 4); and performing the primary cooling step in two stages (col 5, lns 55-65).

17. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al (EP 0955143 A2). In regard to claim 1, Kobayashi et al teach the basic claimed process including using a mold comprising a pair of male and female mold halves that can be moved towards and away from each other; supplying a skin material to a gap between the pair of male and female mold halves of the mold in an open state; supplying molten synthetic resin between a back surface of the skin material and a molding surface of one of the pair of male and female mold halves that faces the back surface; clamping the mold either after the thermoplastic resin has been supplied or while the thermoplastic resin is being supplied; carrying out primary cooling of the molten synthetic resin while the mold is being clamped under a predetermined clamping pressure; opening the mold halfway and forming a predetermined gap between the pair of male and female mold halves; carrying out secondary cooling of the molten synthetic resin while the mold is being held in the half-open state; and opening the mold after the molten synthetic resin has hardened and extracting a molded article as a final product. As a note, the fabric with raise surface of Kobayashi et al constitutes a skin material having a nap on the outer surface. However, Kobayashi et al do not teach opening the

Art Unit: 1732

mold halfway in no more than one second. The rate of opening a mold is well-known in the molding art as an important molding parameter and the desired time period to open the mold halfway would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention was made. Further, the claimed time period is generally well-known in the molding art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to open the mold of Kobayashi et al within one second in order to reduce cycle time. In regard to claims 2-4, Kobayashi et al teach forming a gap that equals or exceeds 80% of the thickness of the final product (fig 4); and performing the primary cooling step in two stages (paragraph 0025). However, Kobayashi et al do not teach forming the gap by adjusting the mold halves in increments of 0.1mm. The rate of opening a mold is well-known in the molding art as an important molding parameter and the desired increment for achieving the gap would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention was made. Further, the claimed increment is generally well-known in the molding art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to open the mold of Kobayashi et al at an increment of 0.1mm in order to prevent damage to the molded article of Kobayashi et al.

18. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al (EP 0955143 A2). In regard to claim 9, Kobayashi et al teach the basic claimed process including using a mold comprising a pair of male and female mold

Art Unit: 1732

halves that can be moved towards and away from each other; supplying a skin material to a gap between the pair of male and female mold halves of the mold in an open state; supplying molten synthetic resin between a back surface of the skin material and a molding surface of one of the pair of male and female mold halves that faces the back surface; clamping the mold either after the thermoplastic resin has been supplied or while the thermoplastic resin is being supplied; carrying out primary cooling of the molten synthetic resin while the mold is being clamped under a predetermined clamping pressure; opening the mold halfway and forming a predetermined gap between the pair of male and female mold halves; carrying out secondary cooling of the molten synthetic resin while the mold is being held in the half-open state; and opening the mold after the molten synthetic resin has hardened and extracting a molded article as a final product.

As a note, the fabric with raise surface of Kobayashi et al constitutes a skin material having a nap on the outer surface. However, Kobayashi et al do not teach forming the gap by adjusting the mold halves in increments of 0.1mm. The rate of opening a mold is well-known in the molding art as an important molding parameter and the desired increment for achieving the gap would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention was made. Further, the claimed increment is generally well-known in the molding art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to open the mold of Kobayashi et al at an increment of 0.1mm in order to prevent damage to the molded article of Kobayashi et al. In regard to claims 10-11, Kobayashi et al teach forming a gap that equals or exceeds 80% of the thickness

of the final product (fig 4); and performing the primary cooling step in two stages (paragraph 0025).

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDMUND H. LEE whose telephone number is 571.272.1204. The examiner can normally be reached on MONDAY-THURSDAY FROM 9AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on 571.272.1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EHL

EDMUND H. LEE
Primary Examiner
Art Unit 1732



3/20/04